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July 10, 1998

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Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554


FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Re: ET Docket No. 98-76
Uniden America Corporation
Comments

Dear Ms. Salas:

On behalf of Uniden America Corporation, attached please
find for filing its comments in ET Docket No. 98-76.

Sincerely,


Gregg P. Skall
Counsel for Uniden America Corporation

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Before the
Federal Communications Commission
Washington, DC 20554

JUL 10 1998
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

Amendments of Parts 2 and 15)
of the Commission's Rules)
to Further Ensure that Scanning)
Receivers Do Not Receive)
Cellular Radio Signals)

ET Docket No. 98-76
RM-9022

COMMENTS OF UNIDEN AMERICA CORPORATION

Introduction

1. Uniden America Corporation (hereinafter "Uniden"), pursuant to Section 1.415 of the Commission's Rules and Regulations, 47 C.F.R. 1.415, respectfully submits its Comments to the Commission's Notice of Proposed Rule Making in the above-captioned proceeding to ensure that scanning receivers do not receive cellular radio signals and other unauthorized and unwarranted receptions. Uniden has a strong interest in this proceeding as it responds to a petition it filed on February 3, 1997. Generally, Uniden supports all of the proposals contained in the NPRM. Together, they would provide a desired degree of certainty for manufacturers in the process of designing and manufacturing scanning radio receivers (hereinafter "scanners"). Furthermore, if adopted, the proposed criteria would serve to reduce the possible illicit and undesired use of scanners for the purpose of intercepting cellular telephone conversations.

2. Along with its parent corporation and affiliate companies, Uniden manufactures and markets a broad line of communications equipment, such as professional land mobile, citizens band and marine radios as well as cordless and cellular telephones and other consumer electronics devices. Among these are scanning radio receivers, commonly known as scanners. Uniden is also a major importer of such equipment in the United States. Scanners represent an important segment of Uniden's total business in the United States and as such, it has always sought to have its products

used only for lawful purposes and to discourage improper use. Accordingly, Uniden lauds the Commission's attempt, by this NPRM, to further define the scope of lawful scanner use and to identify with greater particularity those modifications which it will not tolerate.

Background

3. At the time Uniden filed its Petition, illegal interception of cellular telephone conversations had obtained a high profile in the U.S. press and was a subject of concern by both the Commission and members of the United States Congress. Unfortunately, the furor surrounding certain celebrated cases of cellular telephone interception had created an environment in which lawful uses of scanners were obscured and an outright ban on manufacture, sale and distribution of scanners was dangerously close to becoming a reality. The circumstances made clear that the Commission needed to act to adopt technical rules that more precisely defined restrictions in the manufacture, sale and modification of scanners to make the illegal interception of cellular telephone conversations as difficult as possible. Such action is also essential in the necessary effort by the Commission to preserve scanners for their lawful and beneficial uses and for those law abiding citizens who rely upon them for such purposes. While Commission rules already restrict scanners from being able to receive the fundamental frequencies used by the cellular telephone services, however, new rules are needed to prohibit the reception of cellular conversations through the phenomenon known as "image frequencies." The explanation of this phenomenon is well detailed by the Commission's staff in the NPRM. In this connection, Uniden's primary proposal was the adoption of a 38 decibel ("dB") image rejection level for all scanners against the reception of cellular telephone frequencies in the bands tuned by a scanner.

4. Furthermore, through Congressional hearings and other forums addressing these issues, Uniden became aware that certain individuals and companies were providing instructions for

detailed, step-by-step scanner modification, as well as providing such modification services to others. In comments supporting its petition for rule making, Uniden proposed in response to this development, that certain circuit components be "hardened" to prevent tampering which might result in illegal modifications. The hardening proposal was designed to make a scanner inoperable when an illegal modification attempt was made. It is unfortunate that the current NPRM is required. However, a certain segment of individuals will apparently continue in their efforts to illegally modify scanners to eavesdrop on cellular telephone conversations and their participants. Accordingly, Uniden offers its full support to the proposals contained in the NPRM as modified by the following comments.

Discussion

5. Uniden proposed that the Commission require an image frequency rejection ratio standard of 38 dB. Uniden still believes that the 38 dB image rejection ratio is the proper standard, although it recognizes that arguments can be mustered for both a higher or lower figure. But, a level much lower than 38 dB does not offer sufficient image rejection while a standard much higher than 38 dB would impose unbearable manufacturing costs and increased retail prices upon innocent scanner enthusiasts who have no intention of using the device illegally.

6. Rather than an image frequency rejection standard, the Commission has proposed a common level of 40 microvolts (40 uV) as a threshold for the rejection of cellular telephone frequencies by scanners. This level would be measured directly from the antenna jack of the scanner. Thus, a scanner would demonstrate its compliance with the proposed rule by rejecting an artificially generated ratio signal of 40 uV that is directly coupled to the antenna jack on a scanner with a signal source tuned to any cellular telephone frequency. Uniden applauds the Commission's staff in this creative enhancement to its proposal. It agrees that a "preset level" of uniform rejection

is much easier to regulate, as well as to monitor, during production, in that the receiver characteristics of each scanner device must be measured in order to calculate the proper image frequency rejection level for that particular device. This is especially true since the fundamental cellular frequency is not legally tunable by a scanner, requiring that a "pseudo reference level" be established by measuring a receiver's sensitivity on tunable bands near the cellular bands. Uniden agrees that the 40 uV field strength level equates to the same threshold level that a receiver with typical sensitivity measures at 38 dB above the lowest discernible signal. Therefore, Uniden fully supports the Commission's alternative proposal to establish a 40 uV signal threshold level.

7. Addressing its concern that cellular service transmissions could be picked up through a scanner cabinet, the Commission further proposed to require that scanning receivers not be able to receive a signal level of 5 millivolts per meter (mV/m) or less in cellular frequency bands for any untunable frequency measured by field strength rather than directly coupled input to the antenna port. The obvious intent of this proposal is to prohibit a design that would allow such reception through the cabinet or casing. Uniden agrees fully with the rationale and purpose of this proposal. However, based upon our engineering studies, Uniden believes the proposed 5 mV/m standard to be too severe, especially when the device is tested in the field with the antenna attached. As proposed, the requirement will add greatly to the testing costs and time required for compliance with the Commission's equipment authorization program. Rather, based on our engineering experiences, as an alternative to the Commission's proposal, Uniden suggests that the threshold field strength level be set to 1 mV/m and that investigation of this standard be required only when a design raises suspicion that it does not meet this level.

8. Uniden believes the 1 mV/m standard to constitute "good engineering practices". Requirements for equipment authorization would then be met by a statement in the application

attesting to compliance with this standard in the product's design and a formal test would not be necessary to obtain equipment authorization. On the other hand, if the Commission suspects that a manufacturer has intentionally designed a scanner so that it might enable cellular reception through the cabinet, then sample testing would reveal the design and the Commission could take appropriate action. Knowledge of the rule should itself be sufficient incentive to keep manufacturers from incorporating this feature.

9. The Commission also indicated in the NPRM that it would welcome comments on testing procedure. In response, Uniden recommends that the field strength immunity level measurements be performed in an "open field" test environment as opposed to a small test cell. Otherwise, the test could produce anomalies which would not replicate a real world environment. Moreover, Uniden requests that the Commission allow testing to be conducted for this purpose with the antenna port leads disconnected from the receiver to eliminate signal levels that would be generated from the open antenna port rather than the products cabinet or case.

10. The Commission also requested comments concerning circuit hardening and the techniques proposed and in use by Uniden. To Uniden's knowledge, there has been no report of illegal modifications to its scanners manufactured since the implementation of this process more than a year ago. In apparent recognition of Uniden's success, the Commission proposes a rule requiring that scanner design make the tuning and control circuitry completely inaccessible, such that any attempts to modify the equipment to receive cellular telephone transmissions would likely render the receiver inoperable. At paragraph 10 of the NPRM, the Commission recognizes Uniden's current approach as one of the methods which would successfully accomplish this objective. Uniden supports the adoption of this rule, based on its understanding that the Commission accepts its circuitry protection methods as detailed in Uniden's comments filed on March 10, 1997. Uniden

also supports the Commission's proposal to "require that any application for certification of a scanning receiver include additional information to ensure that the Commission's proposed requirements will be met".

11. Uniden made an additional and important proposal to help protect the circuitry of scanners from illegal modification. As the Commission acknowledges, a scanner certification application must include block diagrams, a technical description of the circuitry, and photographs of the inside and outside of the unit. Because of this requirement, Uniden expressed concern that this information would be available to anyone, upon request, through the Commission's own public file reference room or a Freedom of Information Act request. Placing this information in the Commission's public files strikes Uniden as unwise, as it provides to any technically sophisticated would-be lawbreaker, an unnecessary avenue for information on how to navigate the circuitry to defeat the noble purpose of the rules themselves. Therefore, Uniden requested that the Commission afford automatic confidentiality protection to all scanning receiver certification applications. The Commission chose, however, not to propose such protection and expressed concern over the administrative burden of such a rule and the loss of associated filing fees. Uniden respectfully requests the Commission to reconsider this decision. It strikes Uniden that the Commission resources required to classify these applications as confidential, for the few instances that will be required, pale in comparison to the resources that will be required of the Commission to deal with rule violators enabled by the public availability of this data. On balance, the significance of public interest being protected should convince the Commission of the requirement to maintain the confidentiality of this sensitive information.

12. Responding to the Commission's request for comments regarding the definition of a scanner, Uniden agrees with the Commission's concern and supports its effort to make all devices

capable of receiving cellular telephone calls subject to the technical criteria and prohibitions of the proposed rules. Current rules do not preclude other receivers from receiving cellular telephone communications and Uniden supports the elimination of this "loophole".

13. The NPRM also acknowledges that some test equipment has the capability to receive cellular telephone calls. Any marketing of devices labeled as "test equipment," but not sold to testing or maintenance personnel, should be required to meet the same standards that are mandated for scanners and their manufacturers and marketing companies. However, as the Commission acknowledges, it was not the intent of Congress to ban legitimate test equipment from tuning cellular frequencies and such an attempt would be counterproductive to efficient service from the cellular industry itself. Accordingly, Uniden agrees with the proposal that these situations be judged on a "case-by-case" basis; although the manufacturers and distributors of such professional test equipment should be required to declare their marketing intent and, as proposed by the Commission, market such devices only to professional technical personnel for use in conjunction with their official duties testing of equipment or systems or for scientific investigations. Upon demand by an FCC official, such companies should also be required to demonstrate the efforts they have taken to restrict sales of their devices to the public at large.

14. The Commission also requests comments on the requirement of equipment authorizations for kits, such as frequency converters. Uniden believes that any device marketed for the purpose of thwarting the Commission's efforts to prohibit the illegal interception of cellular telephone conversations, must be included for coverage under the Commission's proposed rules. Therefore, Uniden supports the proposals to "prohibit the importation and manufacture of scanning receiver and frequency converter kits that are capable of receiving and decoding signals from the Cellular Service frequency bands".

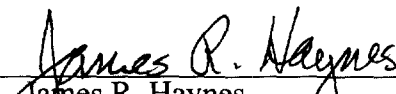
Conclusion

15. With the exception of the proposals discussed in paragraphs 7 and 8 above, Uniden is in agreement with the NPRM as proposed. Although the technical details are not yet mandated, Uniden has been incorporating these same basic design principles into its products for the past year.

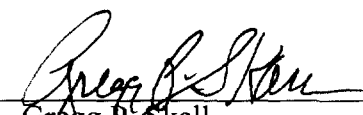
We strongly believe that this has reduced the illegal reception of cellular telephone conversations since this practice was implemented.

Respectfully submitted,

UNIDEN AMERICA CORPORATION

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